WEST Search History

DATE: Sunday, February 09, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L3	l1 same L2	20	L3
L2	(neural or neuron$4) near4 (oxidat$4 or stress or poison$4 or toxic$4 or graft$1 or ((side or adverse) adj effect$1)) or neuroprotect$4 or neurodegenerat$4 or brain adj trauma$4 or als or amyotroph$4 adj later$4 adj sclero$4 or parkinson$4 or alzheimer$4 or huntington$4	3419413	L2
L1	pyruv$4 same (antioxidant$1 or vitamine adj e or tocopherol$4 or vitamin adj a or cartoene$1) same (lipid$1 or monoglyceride$1 or diglyceride$1 or triglyceride$1 or fatty adj acid$1)	107	L1

END OF SEARCH HISTORY

FILE 'HOME' ENTERED AT 12:21:06 ON 09 FEB 2003

=> file caplus,biosis,medline,drugu,embase
COST IN U.S. DOLLARS — SINCE FILE ENTRY: 0.21 — TOTAL SESSION: 0.21
FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 12:21:22 ON 09 FEB 2003
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FILE 'BIOSIS' ENTERED AT 12:21:22 ON 09 FEB 2003

FILE 'MEDLINE' ENTERED AT 12:21:22 ON 09 FEB 2003

FILE 'DRUGU' ENTERED AT 12:21:22 ON 09 FEB 2003

FILE 'EMBASE' ENTERED AT 12:21:22 ON 09 FEB 2003

=> s (pyruvate or pyruvic acid) and (antioxidant? or vitamin? e or tocopherol? or vitamin a or carotene?) and (lipid? or monoglyceride? or diglyceride? or triglyceride? or fatty acid?)
L1 575 (PYRUVATE OR PYRUVIC ACID) AND (ANTIOXIDANT? OR VITAMIN? E OR TOCOPHEROL? OR VITAMIN A OR CAROTENE?) AND (LIPID? OR MONOGLYCERIDE? OR DIGLYCERIDE? OR TRIGLYCERIDE? OR FATTY ACID?)

=> s (neural or neuron? or nerve?) and (oxidat? or stress or poison? or toxic? or graft? or ((side or adverse)(w)effect?)) or neuroprotect? or neurodegenerat? or brain? trauma? or als or amyotroph? or parkinson? or alzheim? or huntington?
4 FILES SEARCHED...
L2 628503 (NEURAL OR NEURON? OR NERVE?) AND (OXIDAT? OR STRESS OR POISON? OR TOXIC? OR GRAFT? OR ((SIDE OR ADVERSE)(W) EFFECT?)) OR NEUROPROTECT? OR NEURODEGENERAT? OR BRAIN? TRAUMA? OR ALS OR AMYOTROPH? OR PARKINSON? OR ALZHEIM? OR HUNTINGTON?

=> s l1 and l2
L3 19 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 16 DUP REM L3 (3 DUPLICATES REMOVED)

=> d 1-16 bib,ab

L4 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2002:315408 CAPLUS
DN 136:330319
TI Novel **antioxidants**
IN Avery, Mitchell Allen; Pershadsingh, Harrihar A.
PA USA
SO U.S. Pat. Appl. Publ., 56 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002048798	A1	20020425	US 2001-809518	20010314
PRAI	US 2000-189514P	P	20000315		

OS MARPAT 136:330319

AB This invention comprises administering to a human or animal in need of treatment an effective amt. of an **antioxidant** lipoic acid deriv. and/or pharmaceutically acceptable salts and solvates thereof for the treatment or prevention of pathol. (inflammatory, proliferative and degenerative diseases, e.g. diabetes mellitus, atherosclerosis, **Alzheimer**'s disease and chronic viral diseases) and non-pathol. (e.g. skin aging and wrinkle formation) conditions caused by oxidative damage. Methods of synthesizing novel **antioxidant** lipoic acid derivs. and their use in preventing or treating diseases or conditions caused by oxidative stress and other free radical mediated conditions are described. Another aspect of this invention is the use of these **antioxidant** compns. for the protection of skin from damage caused by UV radiation and dessication, and to provide improved skin feel by desquamating, cleansing and clarifying the skin. The compns. described in this invention increase cellular viability of epidermal cells, promote cytoprotection, and decrease the prodn. of inflammatory mediators such as inflammatory cytokines in these cells. The **antioxidant** compns. are incorporated into sunscreen products, soap, moisturizing lotions, skin toners, and other skin care products.

L4 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2002:937303 CAPLUS

DN 138:20443

TI Endocrine disruptor screening using DNA chips of endocrine disruptor-responsive genes

IN Kondo, Akihiro; Takeda, Takeshi; Mizutani, Shigetoshi; Tsujimoto, Yoshimasa; Takashima, Ryokichi; Enoki, Yuki; Kato, Ikunoshin

PA Takara Bio Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 386 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002355079	A2	20021210	JP 2002-69354	20020313
PRAI	JP 2001-73183	A	20010314		
	JP 2001-74993	A	20010315		
	JP 2001-102519	A	20010330		

AB A method and kit for detecting endocrine-disrupting chems. using DNA microarrays are claimed. The method comprises prepg. a nucleic acid sample contg. mRNAs or cDNAs originating in cells, tissues, or organisms which have been brought into contact with a sample contg. the endocrine disruptor. The nucleic acid sample is hybridized with DNA microarrays having genes affected by the endocrine disruptor or DNA fragments originating in these genes have been fixed. The results obtained are then compared with the results obtained with the control sample to select the gene affected by the endocrine disruptor. Genes whose expression is altered by tri-Bu tin, 4-octaphenol, 4-nonylphenol, di-N-Bu phthalate, dichlorohexyl phthalate, octachlorostyrene, benzophenone, diethylhexyl phthalate, diethylstilbestrol (DES), and 17-.beta. estradiol (E2), were found in mice by DNA chip anal.

L4 ANSWER 3 OF 16 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.

AN 2002362248 EMBASE

10/021,735

TI Hypoxia-induced **lipid** peroxidation in rat brain and protective effect of carnitine and phosphocreatine.
AU Rauchova H.; Koudelova J.; Drahota Z.; Mourek J.
CS H. Rauchova, Institute of Physiology, Academy of Sciences, Videnska 1083, 142 20 Prague 2, Czech Republic. rauchova@biomed.cas.cz
SO Neurochemical Research, (1 Sep 2002) 27/9 (899-904).
Refs: 34
ISSN: 0364-3190 CODEN: NEREDZ
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB The exposure to hypobaric hypoxia increased **lipid** peroxidation (as indicated by thiobarbituric acid-reactive substances [TBARS] in rat brain. Plasma lactate/**pyruvate** ratio was used as a marker of hypoxia. We compared the protective effect of .alpha.-**tocopherol** with the effect of L-carnitine or phosphocreatine. Rats pretreated with .alpha.-**tocopherol**, L-carnitine, or phosphocreatine had lower TBARS levels after the exposure to hypobaric hypoxia. However, lactate/**pyruvate** ratio was improved only in rats pretreated with L-carnitine or phosphocreatine. We conclude from our data that, contrary to .alpha.-**tocopherol**, protective effects of L-carnitine and phosphocreatine administrations are due to their regulation of metabolic reactions during hypobaric hypoxia rather than to their scavenger activity.

L4 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2001:828415 CAPLUS
DN 137:89412
TI Detection of variations in the DNA methylation profile of genes in the determining the risk of disease
IN Berlin, Kurt; Piepenbrock, Christian; Olek, Alexander
PA Epigenomics A.-G., Germany
SO PCT Int. Appl., 636 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 68

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001077373	A2	20011018	WO 2001-XA1486	20010406
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, CF, CG, CI, CM, GA, GW, ML, MR, NE, SN, TD, TG				
DE 10019058	A1	20011220	DE 2000-10019058	20000406
WO 2001077373	A2	20011018	WO 2001-DE1486	20010406
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,				

ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1274865 A2 20030115 EP 2001-953936 20010406
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI DE 2000-10019058 A 20000406
WO 2001-DE1486 W 20010406
DE 2000-10019173 A 20000407
DE 2000-10032529 A 20000630
DE 2000-10043826 A 20000901
WO 2001-EP3969 W 20010406

AB The invention relates to an oligonucleotide kit as probe for the detection of relevant variations in the DNA methylation of a target group of genes. The invention further relates to the use of the same for detg. the gene variant with regard to DNA methylation, a medical device, using an oligonucleotide kit, a method for detg. the methylation state of an individual and a method for the establishment of a model for establishing the probability of onset of a disease state in an individual. Such diseases may be: undesired pharmaceutical **side-effects** ; cancerous diseases; CNS dysfunctions, injuries or diseases; aggressive symptoms or relational disturbances; clin., psychol. and social consequences of brain injury; psychotic disorders and personality disorders; dementia and/or assocd. syndromes; cardiovascular disease, dysfunction and damage; dysfunction, damage or disease of the gastrointestinal tract; dysfunction, damage or disease of the respiratory system; injury, inflammation, infection, immunity and/or anastasis; dysfunction, damage or disease of the body as an abnormal development process; dysfunction, damage or disease of the skin, muscle, connective tissue or bones; endocrine and metabolic dysfunction, damage or disease; headaches or sexual dysfunction. This abstr. record is one of several records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.

L4 ANSWER 5 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:208267 BIOSIS
DN PREV200200208267
TI Role of reactive oxygen species and glutathione in inorganic mercury-induced injury in human glioma cells.
AU Lee, Young Woo; Ha, Mi Suk; Kim, Yong Keun (1)
CS (1) Department of Physiology, College of Medicine, Pusan National University, Pusan, 602-739: Kim430@hyowon.pusan.ac.kr South Korea
SO Neurochemical Research, (November, 2001) Vol. 26, No. 11, pp. 1187-1193. http://www.kluweronline.com/issn/0364-3190. print.
ISSN: 0364-3190.
DT Article
LA English
AB The present study was undertaken to examine the role of reactive oxygen species (ROS) and glutathione (GSH) in glia cells using human glioma cell line A172 cells. HgCl2 caused the loss of cell viability in a dose-dependent manner. HgCl2-induced loss of cell viability was not affected by H2O2 scavengers catalase and **pyruvate**, a superoxide dismutase, a peroxynitrite scavenger uric acid, and an inhibitor of nitric oxide NG-nitro-arginine Methyl ester. HgCl2 did not cause changes in DCF fluorescence, an H2O2-sensitive fluorescent dye. The loss of cell viability was significantly prevented by the hydroxyl radical scavengers dimethylthiourea and thiourea, but it was not affected by **antioxidants** DPPD and Trlox. HgCl2-induced loss of cell viability was accompanied by a significant reduction in GSH content. The GSH

depletion was almost completely prevented by thiols dithiothreitol and GSH, whereas the loss of viability was partially prevented by these agents. Incubation of cells with 0.2 mM buthionine sulfoximine for 24 hr, a selective inhibitor of gamma-glutamylcysteine synthetase, resulted in 56% reduction in GSH content without any change in cell viability. HgCl2 resulted in 34% reduction in GSH content, which was accompanied by 59% loss of cell viability. These results suggest that HgCl2-induced cell death is not associated with generation of H2O2 and ROS-induced **lipid** peroxidation. In addition, these data suggest that the depletion of endogenous GSH itself may not play a critical role in the HgCl2-induced cytotoxicity in human glioma cells.

L4 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:508929 BIOSIS
DN PREV200100508929
TI Reduced neuron loss and glial scarring in rat lesions treated with NeuregenTM.
AU Espinosa, J. A. (1); Struble, R. G.; Reichensperger, J. D.; McManus, D. Q. (1); Brewer, G. J. (1)
CS (1) Neurology, Southern Illinois Univ Sch of Med, Springfield, IL USA
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 562. print. Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.
DT Conference
LA English
SL English
AB NeuregenTM is an optimized serum-free culture medium that promotes survival of adult rat and human CNS neurons and retards glial growth. At the time of CNS surgery, it would be extremely helpful to irrigate the lesion with a solution that promotes neuronal growth and survival, instead of normal saline used in human CNS surgery, which does not promote survival. Neuregen includes balanced salts, glucose, **pyruvate**, albumin, 18 non-excitotoxic amino acids, 10 vitamins, essential **fatty acids**, 6 hormones, 5 **antioxidants** and 5 other ingredients. We hypothesize that CNS lesions irrigated and soaked in Neuregen will show better neuronal survival in deafferented regions than lesions irrigated with saline. Lesion of the fimbria-fornix was achieved by aspiration through the cortex. Four weeks after lesion, brains were perfused, embedded, sectioned and stained with cresyl violet for neuron counts in the medial septum and the cortex. Treatment of the lesion cavity with Neuregen resulted in a 55% increase in neuron density in the ipsilateral septum compared to treatment with saline ($p<0.02$). Cortical lesions treated with Neuregen showed a mean 27% increase in neuron density above lesions treated with saline ($p=0.02$), equivalent to unlesioned sham treatment. Neuregen produced a coincident 4-fold reduction in GFAP immunoreactivity, compared to saline ($p=0.002$), to levels equivalent to sham lesions. These results suggest that a highly optimized nutrient medium promotes neuron survival and functional recovery following CNS surgery.

L4 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
AN 2001:570365 CAPLUS
DN 135:133284
TI H2O2-induced cell death in human glioma cells: role of **lipid** peroxidation and PARP activation
AU Lee, Young Woo; Ha, Mi Suk; Kim, Yong Keun
CS Department of Neurosurgery, College of Medicine, Pusan National University, Pusan, 602-739, S. Korea
SO Neurochemical Research (2001), 26(4), 337-343

CODEN: NEREDZ; ISSN: 0364-3190
PB Kluwer Academic/Plenum Publishers
DT Journal
LA English
AB Reactive oxygen species (ROS) have been implicated in the pathogenesis of a no. of **neurodegenerative** disorders. However, the underlying mechanism of ROS-induced cell injury remains to be defined. This study was undertaken to examine the role of **lipid** peroxidn. and poly (ADP-ribose) polymerase (PARP) activation in H2O2-induced cell death in A172 cells, a human glioma cell line, H2O2 induced a dose- and time-dependent cell death. The cell death was prevented by thiols (dithiothreitol and glutathione), iron chelators (deferoxamine and phenanthroline), H2O2 scavengers (catalase and **pyruvate**), and a hydroxyl radical scavenger (dimethylthiourea). **Antioxidants** N,N'-diphenyl-p-phenylenediamine (DPPD) and Trolox had no effect on the H2O2-induced cell death. **Lipid** peroxidn. did not increase in human glioma cells exposed to H2O2. The PARP inhibitor 3-aminobenzamide prevented the cell death induced by H2O2. The PARP activity was increased by H2O2 and the H2O2 effect was prevented by 3-aminobenzamide, dithiothreitol, and phenanthroline. The ATP depletion induced by H2O2 was prevented by catalase, dithiothreitol, phenanthroline, and 3-aminobenzamide, but not by DPPD. These results indicate that the H2O2-induced cell death is mediated by PARP activation but not by **lipid** peroxidn. in human glioma cells.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2000:814335 CAPLUS
DN 133:344634
TI Ceruloplasmin and an **antioxidant** composition comprising the same and their uses as **neuroprotective** agent
IN Paquin, Joanne; Mateescu, Mircea-Alexandru; De Grandpre, Eric
PA Gestilab, Inc., Can.
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000067782	A2	20001116	WO 2000-CA529	20000505
WO 2000067782	A3	20010322		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1176977	A2	20020206	EP 2000-926611	20000505

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 2002094949	A1	20020718	US 2001-12730	20011105
PRAI CA 1999-2270853	A	19990505		
WO 2000-CA529	W	20000505		

AB Disclosed are a **neuroprotective** compn. for protecting **neuronal** cells against **oxidative stress** and

methods for using and prepg. the same. More particularly, the **neuroprotective** compn. of the invention comprises a therapeutically effective amt. of ceruloplasmin or a functional deriv. thereof. The **neuroprotective** compn. is characterized in that it protects **neuronal** cells from reactive oxygen species such as .cntdot.O2- and .cntdot.OH. In a preferred embodiment, the **neuroprotective** compn. further comprises an **antioxidant** consisting of catalase or of an amphiphilic physiol. antioxidative soln. comprising a mixt. of **pyruvate, antioxidant,** and **lipid**(s) such as **fatty acids.** The **neuroprotective** compn. could be used for the treatment of **brain trauma,** brain or cerebrovascular ischemia, **neurodegenerative** diseases, **poisoning** of **neuronal** cells, the diminution of drugs **side effects** and for preservation of **neuronal grafts** .

L4 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2000:814300 CAPLUS
DN 133:366422
TI **Pyruvate, antioxidants,** and **lipids** in **neuroprotective** compositions
IN Paquin, Joanne; Mateescu, Mircea-alexandru; De Grandpre, Eric
PA Gestilab Inc., Can.
SO PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000067744	A1	20001116	WO 2000-CA523	20000505
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1176954	A1	20020206	EP 2000-926605	20000505
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 2002128316	A1	20020912	US 2001-21735	20011105
PRAI	CA 1999-2270795	A	19990505		
	WO 2000-CA523	W	20000505		

AB A **neuroprotective** compn. for protecting **neuronal** cells against **oxidative stress** and methods for using and prepg. the same. More particularly, the **neuroprotective** compn. of the invention comprises a mixt. of **pyruvate, antioxidant,** and **lipid**(s) such as **fatty acids.** The **neuroprotective** compn. could be used for the treatment of **brain trauma,** brain or cerebrovascular ischemia, **neurodegenerative** diseases, **poisoning** of **neuronal** cells, the diminution of drugs **side effects** and for preservation of **neuronal grafts** . For example, TRIAD (a combination of Na **pyruvate, Vitamin E,** and egg yolk **fatty acids**) had an **antioxidant neuroprotective** action on cultured

P19 **neurons** exposed to **oxidative stress**. Optimal concns. vary with the type and prooxidant power of reactive oxygen species generating systems. **Pyruvate** was a major contributor of **antioxidant** properties of TRIAD ex vivo (heart, not shown) and in **neuronal** cultures, esp. when TRIAD is administered just prior induction of an **oxidative stress** and remains present for short time of treatment (30-40 min for **neurons**). The contribution of **vitamin E** and egg yolk **fatty acids** may appear even more important in **antioxidant** defense when TRIAD is administered for longer periods (before, during and after **oxidative stress**).

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 16 DRUGU COPYRIGHT 2003 THOMSON DERWENT
AN 1999-33624 DRUGU P
TI Potent **neuroprotective** properties against the **Alzheimer** beta-amyloid by an endogenous melatonin-related indole structure, indole-3-propionic acid.
AU Chyan Y J; Poeggeler B; Omar R A; Chain D G; Frangione B; Ghiso J; Pappolla M A
CS Univ.South-Alabama; Univ.Louisville
LO Mobile, Ala.; Louisville, Ky., USA; Jerusalem, Isr.
SO J.Biol.Chem. (274, No. 31, 21937-42, 1999) 7 Fig. 1 Tab. 46 Ref.
CODEN: JBCHA3 ISSN: 0021-9258
AV University of South Alabama, College of Medicine, Mobile, AL 36617, U.S.A. (M.A.P.).
LA English
DT Journal
FA AB; LA; CT
FS Literature
AB The effect was studied of indole-3-propionate (IPA, Sigma-Chem.) on amyloid-beta(1-42)-induced damage in E-18 fetal rat primary hippocampal **neurons** and SK-H-SH human neuroblastoma cells. IPA protected cells against the **oxidative stress** and death mediated by beta-amyloid. IPA was itself completely devoid of pro-oxidant activity. The findings may be of therapeutic relevance to **Alzheimer**'s disease.

L4 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1999:537082 CAPLUS
DN 132:102215
TI **Oxidative stress**, the **antioxidant** network, and prevention of diabetes complications by .alpha.-lipoic acid
AU Packer, Lester
CS Department of Molecular and Cell Biology, University of California, Berkeley, CA, 94720-3200, USA
SO Environmental & Nutritional Interactions (1999), 3(1), 47-76
CODEN: ENINFH; ISSN: 1086-5683
PB Taylor & Francis
DT Journal; General Review
LA English
AB A review and discussion with many refs. **Oxidative stress** may be a major factor in the etiol. of diabetic complications, and **antioxidants** have great therapeutic promise. Sources of **oxidative stress** in diabetes include glycation reactions (prodn. of advanced glycation end products, AGE), hypoxia-reoxygenation, release of transition metals, and a shift in the redox status of the diabetic cell (an increase in the NAD(P)H/NAD(P)+ and lactate/**pyruvate** ratios). Diabetics have been shown to have

increased levels of oxidn. products such as **lipid** hydroperoxides and DNA adducts, and lower levels of **antioxidants** are found in diabetes, such as reduced **vitamin E** in low-d. lipoprotein (LDL) and glutathione in **nerve**. **Antioxidants** are linked in an **antioxidant** network, in which the key components are **vitamin E**, vitamin C, glutathione, and .alpha.-lipoic acid (thioctic acid). In particular, **vitamin E** and .alpha.-lipoic acid show therapeutic potential. **Vitamin E** is the major **lipid** chain-breaking **antioxidant** and the major **antioxidant** in LDL, which is more susceptible to oxidn. in diabetics. Supplementation of diabetics with **vitamin E** decreases the oxidizability of LDL and reduces protein kinase C-.beta. activation, both of which are factors in the accelerated atherosclerosis and microvascular diseases seen in diabetes. .alpha.-Lipoic acid and its reduced form, dihydrolipoic acid, are powerful **antioxidants**. In addn., supplementation with .alpha.-lipoic acid recycles other **antioxidants**, increases cellular and whole-body glucose uptake, increases intracellular glutathione, and decreases cellular NAD(P)H/NAD(P)+ ratios, all of which make it ideally suited to the treatment of diabetic complications. In exptl. and clin. studies, .alpha.-lipoic acid has been shown to markedly reduce the symptoms of diabetic polyneuropathy. Further long-term studies are warranted to investigate the therapeutic potential of **antioxidants** in diabetes.

RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 16 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1998195947 EMBASE
TI Levodopa neurotoxicity: Experimental studies versus clinical relevance.
AU Jenner P.G.; Brin M.F.
CS Dr. P.G. Jenner, Biomedical Sciences Division, Pharmacology Group, King's College London, Manresa Road, London SW3 6LX, United Kingdom
SO Neurology, (1998) 50/6 SUPPL.6 (S39-S43).
Refs: 72
ISSN: 0028-3878 CODEN: NEURAI
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
AB Levodopa therapy remains the major form of treatment for the symptoms of **Parkinson**'s disease (PD). However, there has been a suspicion that its use may hasten the progression of nigral cell degeneration. This concept is based on the ability of levodopa to generate reactive oxygen species and the apparent involvement of **oxidative stress** as a component of the degenerative process that occurs in PD. Indeed, in vitro autoxidation of levodopa causes **oxidative stress**, leading to **neuronal** destruction by necrosis or apoptosis. However, its chronic administration to normal rats or primates has not been associated with clear evidence for destruction of the nigrostriatal pathway. In contrast, in situations in which the nigrostriatal tract is already damaged, there is some evidence to suggest that levodopa treatment can produce further cell destruction associated with **oxidative** processes. However, levodopa does not appear to be **toxic** to the development of fetal nigral **neurons** or to the survival of fetal cell transplants. There is no clinical evidence to suggest that levodopa

has **adverse effects** on dopamine cells in normal humans or on the viability of remaining dopaminergic cells in patients with PD. However, it is only now that specific clinical trials designed to examine the potential neurotoxicity of levodopa are being undertaken.

L4 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1995:981012 CAPLUS
DN 124:76456
TI Thiol agents and Bcl-2 identify an alphavirus-induced apoptotic pathway that requires activation of the transcription factor NF-.kappa.B
AU Lin, Kuo-I; Lee, Swu-Hua; Narayanan, Ramaswamy; Baraban, Jay M.; Hardwick, J. Marie; Ratan, Rajiv R.
CS Dep. Mol. Microbiol. Immunol., Johns Hopkins Sch. Hyg. Public Health, Baltimore, MD, 21205, USA
SO Journal of Cell Biology (1995), 131(5), 1149-61
CODEN: JCLBA3; ISSN: 0021-9525
PB Rockefeller University Press
DT Journal
LA English
AB **Oxidative stress** has been proposed as a common mediator of apoptotic death. To investigate further the role of oxidants in this process we have studied the effects of **antioxidants** on Sindbis virus (SV)-induced apoptosis in two cell lines, AT-3 (a prostate carcinoma line) and N18 (a neuroblastoma line). The thiol **antioxidant**, N-acetylcysteine (NAC), at concns. above 30 mM, completely abrogates SV-induced apoptosis in AT-3 and N18 cells. The effects of NAC cannot be attributed to inhibition of viral entry or viral replication, changes in extracellular osmolarity or to increases in cellular glutathione levels, nor can they be mimicked by chelators of trace metals, inhibitors of **lipid** peroxidn. or peroxide scavengers. In contrast, other thiol agents including pyrrolidine dithiocarbamate (PDTC, 75 .mu.M) are protective. Because NAC and PDTC are among the most effective inhibitors of the transcription factor NF-.kappa.B, we examd. SV's ability to activate NF-.kappa.B before the onset of morphol. or biochem. evidence of apoptosis. Within hours of infection, SV induced a robust increase in nuclear NF-.kappa.B activity in AT-3 and N18 cells; this activation was suppressible by NAC and PDTC. Overexpression of bcl-2 in AT-3 cells, which has been shown to inhibit SV-induced apoptosis, also inhibits SV-induced NF-.kappa.B activation. To det. if NF-.kappa.B activation is necessary for SV-induced apoptosis in these cells, we used double stranded oligonucleotides with consensus NF-.kappa.B sequences as transcription factor decoys (TFDs) to inhibit NF-.kappa.B binding to native DNA sites. Wild-type, but not mutant, TFDs inhibit SV-induced apoptosis in AT-3 cells. In contrast, TFD inhibition of NF-.kappa.B nuclear activity in N18 cells did not prevent SV-induced apoptosis. Taken together, these observations define a cell type-specific transcription factor signaling pathway necessary for SV-induced apoptosis. Understanding the precise mechanism by which Bcl-2 and thiol agents inhibit SV-induced nuclear NF-.kappa.B activity in AT-3 cells may provide insights into the pluripotent antiapoptotic actions of these agents.

L4 ANSWER 14 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:218209 BIOSIS
DN PREV199598232509
TI **Pyruvate** inhibits clofibrate-induced hepatic peroxisomal proliferation and free radical production in rats.
AU Stanko, Ronald T. (1); Sekas, Gail; Isaacson, Israel A.; Clarke, Martha R.; Billiar, Timothy R.; Paul, Harbhaian S.
CS (1) Montefiore Univ. Hosp., Univ. Pittsburgh Med. Cent., 200 Lothrop St., Pittsburgh, PA 15213-2582 USA

SO Metabolism Clinical and Experimental, (1995) Vol. 44, No. 2, pp. 166-171.
ISSN: 0026-0495.
DT Article
LA English
AB In an effort to identify the effects of the 3-carbon compound **pyruvate** on free radical production, we measured hepatic total peroxisomal beta-**oxidation** and catalase activity and the production of lipofuscin-like products in male Sprague-Dawley rats consuming an adequate diet supplemented with **pyruvate**, **vitamin E**, or the peroxisome proliferator and free radical enhancer clofibrate for 22 days (n = 5 in each group). Clofibrate feeding induced hepatomegaly, a fivefold increase in total peroxisomal beta-**oxidation** activity, and a threefold increase in hepatic lipofuscin-like products (P lt .05). **Pyruvate** but not **vitamin E** inhibited the increase in liver size by 70% (P lt .05). Both **pyruvate** and **vitamin E** completely inhibited clofibrate-induced increases in lipofuscin-like products (P lt .05). **Pyruvate** but not clofibrate or **vitamin E** increased plasma concentrations of the nitric oxide metabolites nitrite and nitrate (P lt .05). We conclude that with clofibrate-induced peroxisomal proliferation and free radical production, **pyruvate** will inhibit peroxisomal proliferation and free radical production, inhibit free radical-induced **lipid** peroxidation, and enhance metabolism of nitric oxide.

L4 ANSWER 15 OF 16 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 95172773 EMBASE
DN 1995172773
TI Age- and peroxidative stress-related modifications of the cerebral enzymatic activities linked to mitochondria and the glutathione system.
AU Benzi G.; Moretti A.
CS Istituto di Farmacologia, Facolta di Scienze, Piazza Botta 11,27100 Pavia, Italy
SO Free Radical Biology and Medicine, (1995) 19/1 (77-101).
ISSN: 0891-5849 CODEN: FRBMEH
CY United States
DT Journal; General Review
FS 002 Physiology
008 Neurology and Neurosurgery
020 Gerontology and Geriatrics
029 Clinical Biochemistry
LA English
SL English
AB The aging brain undergoes a process of enhanced peroxidative stress, as shown by reports of altered membrane **lipids**, oxidized proteins, and damaged DNA. The aims of this review are to examine: (1) the possible contribution of mitochondrial processes to the formation and release of reactive oxygen species (ROS) in the aging brain; and (2) the age-related changes of **antioxidant** defenses, both enzymatic and nonenzymatic. It will focus on studies investigating the role of the electron transfer chain as the site of ROS formation in brain aging and the alterations of the glutathione system, also in relation to the effects of exogenous pro-oxidant agents. The possible role of peroxidative stress in age-related **neurodegenerative** diseases will also be discussed.

L4 ANSWER 16 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:436867 BIOSIS
DN PREV199396091492
TI Effect of pretreatment with **vitamin E** or diazepam on

brain metabolism of stressed rats.

AU Shaheen, Amira A.; Hamdy, Mohamed A.; Kheir-Eldin, Adel A.; Lindstrom, Per; El-Fattah, Amal A. Abd

CS Dep. Biochem., Fac. Pharmacy, Cairo Univ. Egypt

SO Biochemical Pharmacology, (1993) Vol. 46, No. 1, pp. 194-197. ISSN: 0006-2952.

DT Article

LA English

AB The effect of **vitamin E** (VE) or diazepam (DZ) pretreatment on some carbohydrate metabolic aspects in the brains of stressed rats was studied. DZ and VE were given i.p. at doses of 5 mg/kg body wt for 6 days prior to subjecting the animals to single swimming **stress** (SSS). Pretreatment of the rats with DZ or VE diminished the **stress**-induced increases in plasma corticosterone and glucose levels and reversed the decrease due to **stress** on brain ATP, glucose, glycogen and **pyruvate** contents. The increase in brain ADP and lactate was brought back to levels which approached the pre-stressed values. Moreover, DZ and VE pretreatments helped in attenuating the **stress**-induced alteration in brain mitochondrial and cytosolic hexokinase as well as sodium, potassium adenosine triphosphatase (Na+,K+-ATPase) activities. The change in these metabolic parameters produced by VE pre-treatment was less than that exhibited by DZ. The effects of VE were explained in light of its **antioxidant** property in preventing the free radical production and **lipid** peroxide formation which are important factors in the pathogenesis of **stress**.